DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027275
Date Inspected: 03-Mar-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Job Site

CWI Name: Bernie Docena

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS Tower

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 5W-PP29.5-W2 deck access hole inside, QA randomly observed ABF/JV qualified welder Jason Collins continuing to perform fill pass back welding on the Complete Joint Penetration (CJP) butt joint. The welder was observed manually welding in the 4G (overhead) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8” diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1110A Revision 1. ABF Quality Control (QC) Harry Scharein was noted monitoring the welding parameters of the welder. QA randomly monitored the welding parameter with reading of 128 amperes which appears in conformance to the contract requirements. During the shift, SMAW cover pass welding was completed and the welder has started flush grinding the cover reinforcement.

At Tower Base 9 meter external diaphragms, the following welding activities were observed;

1. Outer East external diaphragm drop in plate ED1-A429 weld joint #061(1 and 2) / #062 (1 and 2), ABF welder Wai Kitlai was observed perform root pass welding on the PJP T-joint between the 45mm drop in plate and shear plate/tower skin plate and splice butt joint to diaphragm plate. The welder was noted welding at 1G (flat position) utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3160-1. The plates were preheated and maintained to required 225°F temperature using Miller Proheat 35 Induction Heating System.

After the welding completion of the root pass, ABF QC Bernie Docena was observed performing MT on the root welded T-joints and butt joint. No relevant indications were observed. This QA also performed random MT on the same welded root pass with noted same result. The welder resumed FCAW-G welding fill pass until the end of the shift where the welder has not completed the four weld joints. The welder performed the post weld heat treatment (PWHT) after welding using the same preheat temperature and heating machine and held it for three hours as required.

2. Outer East external diaphragm drop in plate WD1-A57 weld joint #063(5 and 6) / #064 (5 and 6), ABF welder Xiao Jian Wan was observed perform root pass welding on the PJP T-joint between the 45mm drop in plate and shear plate/tower skin plate and splice butt joint to diaphragm plate. The welder was noted welding at 1G (flat position) utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3160-1. The plates were preheated and maintained to required 225°F temperature using Miller Proheat 35 Induction Heating System. After the welding completion of the root pass, ABF QC Bernie Docena was observed performing MT on the root welded T-joints and butt joint. No relevant indications were observed. This QA also performed random MT on the same welded root pass with noted same result. The welder resumed FCAW-G welding fill pass until the end of the shift where the welder has not completed the four weld joints. The welder performed the post weld heat treatment (PWHT) after welding using the same preheat temperature and heating machine and held it for three hours as required.

3. Inner East external diaphragm drop in plate WD1-A50 weld joints #069 (3 and 4) and #070 (2), ABF welder Jin Pei Wang was observed continuing to perform fill passes to cover passes welding on the PJP T-joint between the 45mm diaphragm plate to shear/tower skin plate and splice butt joint. The welder was noted welding at 1G (flat) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3160-1. During the shift, FCAW-G cover pass welding was completed on joints mentioned above and the welder has held the same preheat of more than 225°F for three hours after welding as required after welding.

4. After the completion of the above mentioned drop in plate, the welder has moved to another location inner East external diaphragm drop in plate WD1-A59 weld joint/#065 (3 and 4) and #066 (2). ABF welder Jin Pei Wang was observed perform root pass welding on the PJP T-joint between the 45mm drop in plate and tower skin/shear plate and splice butt joint to diaphragm plate. The welder was noted welding at 1G (flat position) utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3160-1. The plates were preheated and maintained to required 225°F/325°F temperature using Miller Proheat 35 Induction Heating System. After the welding completion of the root pass, ABF QC Bernie Docena was observed performing MT on the root welded T-joints and butt joint. No relevant indications were observed. This QA also performed random MT on the same welded root pass with noted same result. The welder resumed FCAW-G welding fill pass to cover pass until the end of the shift where the welder has not completed the three (3) weld joints. The welder performed the post weld heat treatment (PWHT) after welding using the same preheat temperature and heating machine and held it for three hours as required.

WELDING INSPECTION REPORT

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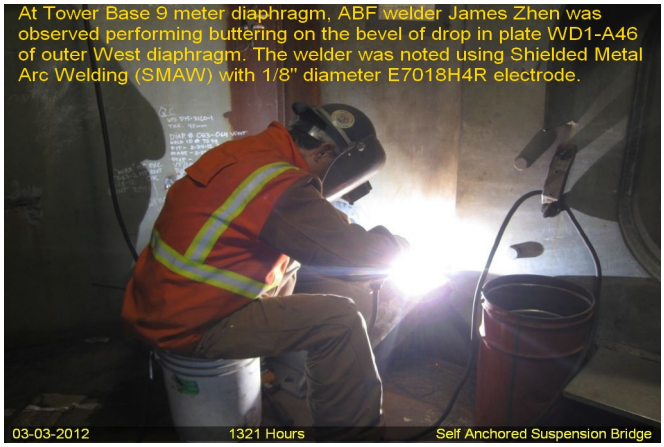

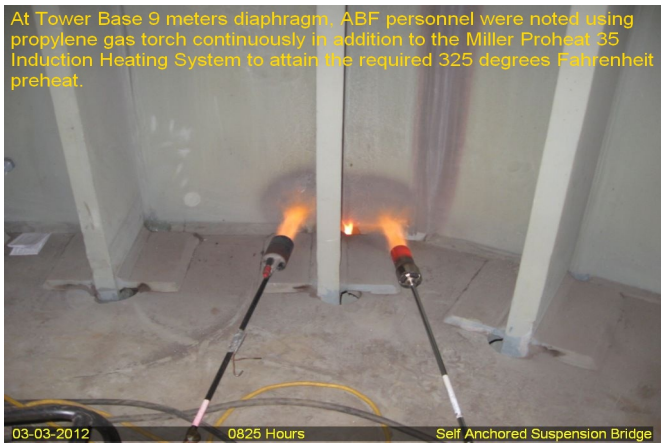

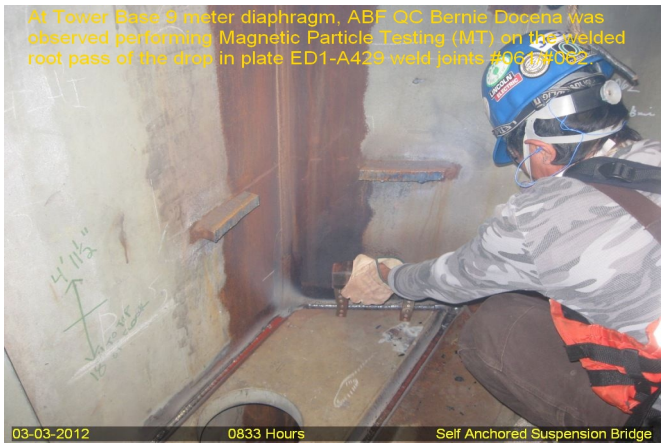

Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer